

STATUS OF THE CLAIMS

1. **(Previously Presented)** A content reproduction device that performs streaming reproduction of a content, the device comprising:
 - a plurality of communication units, each being configured to receive pieces of segmented data of a content transmitted from a content transmission device over a communication path;
 - a content reconstruction unit having a buffer in which the pieces of segmented data received by a corresponding one of said plurality of communication units is temporarily accumulated, and configured to reconstruct the pieces of segmented data accumulated in the buffer into the content;
 - a reproduction unit configured to extract the content from the buffer at a predetermined bit rate and to reproduce the content at the predetermined bit rate, the content having been reconstructed by said content reconstruction unit; and
 - a communication control unit configured to:
 - calculate, for every predetermined time, target transmission speeds to be assigned for content reception by causing the target transmission speeds to associate respectively with said plurality of communication units, based on free space in the buffer and the bit rate; and
 - transmit a first request signal indicating the calculated target transmission speeds corresponding to said plurality of communication units to the content transmission device via one of said plurality of communication units,
 - wherein the pieces of segmented data each includes a counter indicating an order of the segmentation performed by said content transmission device, and
 - said content reconstruction unit is configured to reconstruct the content by extracting the pieces of segmented data accumulated in the buffer in the order of values indicated by said respective counters.
2. **(Previously Presented)** The content reproduction device according to Claim 1, wherein the first request signal indicates addresses for said plurality of communication units.
3. **(Previously Presented)** The content reproduction device according to Claim 1, wherein the first request signal is a content obtainment command indicating addresses for

said plurality of communication units.

4. **(Previously Presented)** The content reproduction device according to Claim 1, further comprising:
a communication fee storage unit which stores, in advance, communication fees of said plurality of communication units,
wherein said communication control unit is configured to determine the target transmission speeds of said plurality of communication units based on the communication fees.
5. **(Previously Presented)** The content reproduction device according to Claim 1, further comprising:
a present position detection unit configured to detect a present position;
a traveling route obtainment unit configured to obtain a traveling route starting from the present position detected by said present position detection unit; and
a reception state storage unit which stores, in advance, data reception speeds of said plurality of communication units at each position on the traveling route obtained by said traveling route obtainment unit,
wherein said communication control unit is configured to determine the target transmission speeds of said plurality of communication units based on free space in the buffer and the data reception speeds of said plurality of communication units at a position indicated by information on a planned transit position after the present position, the data reception speeds being stored in said reception state storage unit.
6. **(Previously Presented)** The content reproduction device according to Claim 5, further comprising:
a reception speed measurement unit configured to measure data reception speeds of said plurality of communication units,
wherein said communication control unit is configured to:
calculate modified target transmission speeds, each being calculated based on a difference between the target transmission speed assigned for the content reception of each of said communication units and each of the data reception speeds measured by said reception

speed measurement unit; and

transmit a second request signal indicating the calculated target transmission speeds to the content transmission device via one of said communication units.

7. **(Previously Presented)** A content transmission device that transmits a content over a communication path, the device comprising:

a content accumulation unit configured to accumulate a content;

a communication unit configured to communicate, over the communication path, with a content reproduction device that includes a plurality of communication units with different addresses; and

a content segmentation unit configured to:

determine amounts of content data to be transmitted based on target transmission speeds of the respective addresses every time a first request signal indicating target transmission speeds of the respective addresses is received, the amounts of content data to be transmitted being determined for the respective addresses;

segment the content accumulated in said content accumulation unit; and

transmit each segmented data of the content addressed to each of the addresses via said communication unit, each segmented data including a counter indicating an order of the segmentation performed,

wherein the plurality of communication units receive part of the segmented data of the content obtained by segmenting data of a single content, and the plurality of communication units reconstruct the segmented data based on the order indicated by the counter.

8. **(Previously Presented)** A content reproduction method for performing streaming reproduction of a content, the method comprising:

a plurality of communication steps, in each of which pieces of segmented data of a content transmitted from a content transmission device over a communication path are received;

a content reconstruction step of temporarily accumulating, in a buffer, the pieces of segmented data received in a corresponding one of the plurality of communication steps, and reconstructing the pieces of segmented data accumulated in the buffer into the content;

a reproduction step of extracting the content from the buffer at a predetermined bit rate

and reproducing the content at the predetermined bit rate, the content having been reconstructed in the content reconstruction step; and

a communication control step of:

calculating, for every predetermined time, target transmission speeds to be assigned for content reception by causing the target transmission speeds to associate respectively with the plurality of communication steps, based on free space in the buffer and the bit rate; and

transmitting a first request signal indicating the calculated target transmission speeds corresponding to the plurality of communication units to the content transmission device using one of the plurality of communication steps,

wherein the pieces of segmented data each includes a counter indicating an order of the segmentation performed by said content transmission device, and

said content reconstruction unit is configured to reconstruct the content by extracting the pieces of segmented data accumulated in the buffer in the order of values indicated by said respective counters.

9. **(Previously Presented)** A content transmission method for transmitting a content over a communication path, the method comprising:

a communication step of communicating, over the communication path, with a content reproduction device that includes a plurality of communication units with different addresses; and

a content segmentation step of:

determining amounts of content data to be transmitted based on target transmission speeds of the respective addresses every time a first request signal indicating target transmission speeds of the respective addresses is received, the amounts of content data to be transmitted being determined for the respective addresses;

segmenting the content accumulated in a content accumulation unit; and

transmitting each segmented data of the content addressed to each of the addresses using said communication step, each segmented data including a counter indicating an order of the segmentation performed,

wherein the plurality of communication units receive part of the segmented data of the content obtained by segmenting data of a single content, and the plurality of communication

units reconstruct the segmented data based on the order indicated by the counter.

10. **(Previously Presented)** A program stored on a computer-readable medium for a content reproduction device that performs streaming reproduction of a content, the program causing a computer to execute the steps included in the content reproduction method according to Claim 8.
11. **(Previously Presented)** A program stored on a computer-readable medium for a content transmission device that transmits a content over a communication path, the program causing a computer to execute the steps included in the content transmission method according to Claim 9.
12. **(Previously Presented)** A content reproduction device that performs streaming reproduction of a content, the device comprising:
 - a plurality of communication units, each being configured to receive pieces of segmented data of a content transmitted from a content transmission device over a communication path;
 - a content reconstruction unit having a buffer in which the pieces of segmented data received by a corresponding one of said plurality of communication units is temporarily accumulated, and configured to reconstruct the pieces of segmented data accumulated in the buffer into the content;
 - a reproduction unit configured to extract the content from the buffer at a predetermined bit rate and to reproduce the content at the predetermined bit rate, the content having been reconstructed by said content reconstruction unit;
 - a communication fee accumulation unit configured to accumulate, in advance, communication fees of the respective communication units; and
 - a communication control unit configured to:
 - determine a use order of said plurality of communication units based on the communication fees accumulated in the communication fee accumulation unit,
 - calculate, for every predetermined time, target transmission speeds to be assigned for content reception by causing the target transmission speeds to associate respectively with said

plurality of communication units, based on the determined use order, free space in the buffer and the bit rate; and

transmit a first request signal indicating the calculated target transmission speeds corresponding to said plurality of communication units to the content transmission device via one of said plurality of communication units.

13. **(Previously Presented)** A content reproduction device according to claim 12, wherein the pieces of segmented data each includes a counter indicating an order of the segmentation performed by said content transmission device, and
said content reconstruction unit is configured to reconstruct the content by extracting the pieces of segmented data accumulated in the buffer in order of values indicated by said respective counters.
14. **(Previously Presented)** The content reproduction device according to Claim 12, wherein the first request signal indicates addresses for said respective communication units.
15. **(Previously Presented)** The content reproduction device according to Claim 12, wherein the first request signal is a content obtainment command indicating addresses for said respective communication units.
16. **(Previously Presented)** The content reproduction device according to Claim 15, further comprising:
 - a present position detection unit configured to detect a present position;
 - a traveling route obtainment unit configured to obtain a traveling route starting from the present position detected by said present position detection unit; and
 - a reception state storage unit which stores, in advance, data reception speeds of said respective communication units at each position on the traveling route obtained by said traveling route obtainment unit,wherein said communication control unit is configured to determine the target transmission speeds of said respective communication units based on free space in said buffer

and the data reception speeds of said respective communication units at a position indicated by information on a planned transit position after the present position, the data reception speeds being stored in said reception state storage unit.

17 **(Previously Presented)** The content reproduction device according to Claim 16, further comprising:

 a reception speed measurement unit configured to measure data reception speeds of said plurality of communication units,

 wherein said communication control unit is configured to:

 calculate modified target transmission speeds, each being calculated based on a difference between the target transmission speed assigned for the content reception of each of said communication units and each of the data reception speeds measured by said reception speed measurement unit; and

 transmit a second request signal indicating the calculated target transmission speeds to the content transmission device via one of said communication units.